

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A computer-implemented method of integrating software systems comprising:

identifying a scope of the integration based on a multi-level top-down approach;

identifying faults in business rules that define software in the scope of the integration by applying generic depth-first search (DFS)-based techniques to the business rules; and

modifying the business rules based on the identified faults.

2. (currently amended) The computer-implemented method of claim 1, where identifying faults in the business rules includes:

representing the business rules using a transition-directed graph (TDG) representation.

3. (currently amended) The computer-implemented method of claim 1, where the multi-level top-down approach includes:

a first level that includes high-level software systems.

4. (currently amended) The computer-implemented method of claim 3, where the multi-level top-down approach further includes:  
a second level that includes business processes of the high-level software systems.

5. (currently amended) The computer-implemented method of claim 4, where the multi-level top-down approach further includes:

a third level that includes business rules that are defined as transitions in the business processes;

a fourth level that includes interface functions that define communications between the business rules; and

a fifth level that includes data used by the business rules and the interface functions.

6. (currently amended) The computer-implemented method of claim 4, further including:

comparing the business processes to locate similar business processes that are to be integrated.

7. (currently amended) The computer-implemented method of claim 1, where identifying the scope of the integration is performed on software systems from multiple merging entities.

8. (currently amended) The computer-implemented method of claim 1, where the identified faults include faults of at least one of inconsistency, contradiction, circularity, subsumption, redundancy, or incompleteness.

9. (currently amended) A computer-implemented system for integrating information distribution systems comprising:

a memory to store instructions; and

a processor to execute the instructions to implement:

means for assisting a user to identify a scope of the integration using a multi-level top-down approach, the identified scope including a set of business processes that are to be integrated and a set of business rules that define the business processes; and

~~a fault detection component configured to identify~~ means for identifying faults in the business rules by applying generic depth-first search (DFS)-based techniques to the business rules.

10. (previously presented) The computer-implemented system of claim 9, where the fault detection component is further configured to represent the business rules using a transition-directed graph (TDG) representation.

11. (previously presented) The computer-implemented system of claim 9, where the multi-level top-down approach includes:

a first level that includes high-level software systems.

12. (previously presented) The computer-implemented system of claim 11,  
where the multi-level top-down approach further includes:  
a second level that includes the business processes, which define the high-level software systems.

13. (previously presented) The computer-implemented system of claim 12,  
where the multi-level top-down approach further includes:  
a third level that includes the business rules defined as transitions in the business processes;  
a fourth level that includes interface functions that define communications between the business rules; and  
a fifth level that includes data used by the business rules and the interface functions.

14. (previously presented) The computer-implemented system of claim 12,  
where the means for assisting compares the business processes to locate similar business processes that are to be integrated.

15. (previously presented) The computer-implemented system of claim 9,  
where the scope of the integration is defined for software systems from multiple merging entities.

16. (previously presented) The computer-implemented system of claim 9, where the identified faults include faults of at least one of inconsistency, contradiction, circularity, subsumption, redundancy, or incompleteness.

17. (currently amended) A computer-implemented method of integrating information distribution systems of merging entities, the method comprising:

identifying top-level software systems that are to be integrated;

identifying business processes in the top-level software systems;

comparing the identified business processes to determine business processes that are related ~~enough to be~~ as candidates for integration;

identifying business rules that define the business processes; and

identifying faults in the business rules by applying generic depth-first search (DFS)-based techniques to the business rules.

18. (currently amended) The computer-implemented method of claim 17, further comprising:

modifying the business rules based on the identified faults.

19. (currently amended) The computer-implemented method of claim 17, where comparing the identified business processes includes finding pairs of business processes that perform similar functions.

20. (currently amended) The computer-implemented method of claim 17, where the identified faults include faults of at least one of inconsistency, contradiction, circularity, subsumption, redundancy, or incompleteness.

21. (currently amended) The computer-implemented method of claim 17, where identifying faults in the business rules further includes:  
representing the business rules using a transition-directed graph (TDG) representation.

22. (currently amended) A computer-readable ~~medium consisting of a physical or logical~~ memory device containing instructions for execution by one or more processors, the computer-readable medium including:  
instructions for assisting a user to identify a scope of an integration of information distribution systems by using a multi-level top-down approach, the identified scope including a set of business processes that are to be integrated and a set of business rules that define the business processes; and  
instructions for identifying faults in the business rules by applying generic depth-first search (DFS)-based techniques to the business rules.

23. (currently amended) The computer-readable ~~medium~~ memory device of claim 22, where the ~~instruction~~ instructions for identifying faults represent the business rules using a transition-directed graph (TDG) representation.

24. (currently amended) The computer-readable ~~medium~~ memory device of claim 22, where the multi-level top-down approach includes:

a first level that includes high-level software systems.

25. (currently amended) The computer-readable ~~medium~~ memory device of claim 24, where the multi-level top-down approach includes:

a second level that includes the business processes, which define the high-level software systems.

26. (currently amended) The computer-readable ~~medium~~ memory device of claim 25, where the multi-level top-down approach includes:

a third level that includes the business rules defined as transitions in the business processes;

a fourth level that includes interface functions that define communications between the business rules; and

a fifth level that includes data used by the business rules and the interface functions.

27. (currently amended) The computer-readable ~~medium~~ memory device of claim 22, where the scope of the integration is defined for information distribution systems from multiple merging entities.

28. (currently amended) The computer-readable ~~medium~~ memory device of claim 22, where the identified faults include faults of at least one of inconsistency, contradiction, circularity, subsumption, or incompleteness.